# UNITED STATES PATENT AND TRADEMARK OFFICE

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| 10/597,863 | 04/23/2007 | Rajeev Y. Nagar | YAMAP1014US | 3801 |

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| EXAMINER |
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| ILUYOMADE, IFEDAYO B |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 April 2007*.

2a)☐ This action is **FINAL**.      2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-8* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *08/10/2006, 02/11/2007*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

## DETAILED ACTION

### *Information Disclosure Statement*

1.      The information disclosure statement (IDS) submitted on 02/11/2009 was filed

after the mailing date of the application on 04/23/2007.  The submission is in

compliance with the provisions of 37 CFR 1.97.  Accordingly, the information disclosure

statement is being considered by the examiner.

### *Specification*

2.      The abstract of the disclosure is objected to because it contains reference

numbers.  Correction is required.  See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 101*

3.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim **8** is rejected under 35 U.S.C. 101 because the claimed invention lacks

patentable utility.  The claim is drawn to a "**program**", therefore, fails to fall within a

statutory category of invention.

A claim directed to a computer program itself is non-statutory because it is not:

A process occurring as a result of executing the program, or

A machine programmed to operate in accordance with the program, or

A manufacture structurally and functionally interconnected with the program in a

manner which enable the program to act as a computer component and realize its

functionality, or

A composition of matter.

See MPEP 2106.01. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

### Claim Rejections - 35 USC § 103

4.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.      Claims **1, 6 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (US Patent No. 4953122) in view of Demsey et al (US Pub. 20040054994).

6.      Regarding claim **1 and 8**, Williams discloses:

- Receiving a write request which specifies at least data for a file to be written, (refer to fig. 4 and column 11, lines 54. Describes a system receiving a write command of host data).

- Querying a next writable address indicating a location at which data is to be written next to the drive apparatus, so as to obtain the next writable address, (refer to fig. 4 and column 11, lines 55. Describes a controller first locates the next sequential free data storage segment on disk that is not flawed).

- Instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc, (refer to fig. 4 and column 11, lines 57. Describes that the host data is then written to this data storage segment along with the logical address of the host data).

7.   Williams lack:

- Instructing the drive apparatus to read metadata for managing the file from a location in the write-once disc, so as to obtain the metadata.

- Updating the metadata to reflect the writing of the data specified by the write request.

- Instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in the step (b) in the write-once disc.

8.   Demsey teaches:

- The metadata map associated with the managed program is updated using the physical address at which the native code was written. If the method involves several writes of the native code cache to the non-volatile memory, the metadata

map may not be updated each time. Rather, the metadata map may be updated

just once, such as on the first or last write to the non-volatile memory. It is

important that the metadata map is updated at some time with the physical

address at which the native code can be executed, (refer to paragraph 42).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine reading, updating, and storing of metadata as taught by Demsey

with that of Williams in order to execute the requested method associated with the

manage program using the physical address.

9.      Regarding claim **6**, Williams discloses:

- The system controller comprising a controller for controlling the drive apparatus,
  (refer to fig. 1 and column 5, line 1. Describes a controller controls an optical
  head having writing means).

- Receiving a write request which specifies at least data for a file to be written,
  (refer to fig. 4 and column 11, lines 54. Describes a system receiving a write
  command of host data).

- Querying a next writable address indicating a location at which data is to be
  written next to the drive apparatus, so as to obtain the next writable address,
  (refer to fig. 4 and column 11, lines 55. Describes a controller first locates the
  next sequential free data storage segment on disk that is not flawed).

- Instructing the drive apparatus to write the data specified by the write request to
  a location indicated by the next writable address in the write-once disc, (refer to

fig. 4 and column 11, lines 57. Describes that the host data is then written to this data storage segment along with the logical address of the host data).

10.    Williams lack:

- Instructing the drive apparatus to read metadata for managing the file from a location in the write-once disc, so as to obtain the metadata.

- Updating the metadata to reflect the writing of the data specified by the write request.

- Instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in the step (b) in the write-once disc.

11.    Demsey teaches:

- The metadata map associated with the managed program is updated using the physical address at which the native code was written. If the method involves several writes of the native code cache to the non-volatile memory, the metadata map may not be updated each time. Rather, the metadata map may be updated just once, such as on the first or last write to the non-volatile memory. It is important that the metadata map is updated at some time with the physical address at which the native code can be executed, (refer to paragraph 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine reading, updating, and storing of metadata as taught by Demsey with that of Williams in order to execute the requested method associated with the manage program using the physical address.

12.     Claims **2 - 5** are rejected under 35 U.S.C. 103 (a) as being unpatentable over

Williams (US Patent No. 4953122) in views of Demsey et al (US Pub. 20040054994).

13.     Williams lacks:

- Regarding claim **2**, wherein the steps (e) and (f) are performed using the same

  write instruction.

- Regarding claim **3**, wherein the step (f) is performed after the step (e) is

  performed.

However Williams discloses:

- The write transaction is then written to the mapping segment buffer to update the

  write transaction history stored therein for later recording on the disk at the next

  mapping segment. The logical address is also used to update the pointer map

  memory, (refer to column 11, lines 59).

14.     Demsey teaches:

- The metadata map associated with the managed program is updated using the

  physical address at which the native code was written. If the method involves

  several writes of the native code cache to the non-volatile memory, the metadata

  map may not be updated each time. Rather, the metadata map may be updated

  just once, such as on the first or last write to the non-volatile memory. It is

  important that the metadata map is updated at some time with the physical

  address at which the native code can be executed, (refer to paragraph 42).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine reading, updating, and storing of metadata as taught by Demsey

with that of Williams in order to execute the requested method associated with the

manage program using the physical address.

15.     Williams lacks:

- Regarding claim **4**, wherein the updated metadata includes a file entry of a

  directory under which the file is recorded.

- Regarding claim **5**, wherein the updated metadata includes a file entry of the file.

16.     Demsey teaches:

- The metadata map associated with the managed program is updated using the

  physical address at which the native code was written. If the method involves

  several writes of the native code cache to the non-volatile memory, the metadata

  map may not be updated each time. Rather, the metadata map may be updated

  just once, such as on the first or last write to the non-volatile memory. It is

  important that the metadata map is updated at some time with the physical

  address at which the native code can be executed, (refer to paragraph 42).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine reading, updating, and storing of metadata as taught by Demsey

with that of Williams in order to execute the requested method associated with the

manage program using the physical address.

### Double Patenting

17.     The nonstatutory double patenting rejection is based on a judicially created

doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18.    Claims **1, 6, 7, and 8** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 6, and 7 of Buban et al (copending Application No. 10597875).

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. The claims are as follows with the difference highlighted.

| 10597863 | 10597875 |
|---|---|
| With reference to claim **1**: the recording method comprising the steps of: (a) receiving a write request which specifies at least data for a file to be written; (b) instructing the drive apparatus to read metadata for managing the file from a location in the write-once disc, so as to obtain the metadata; (c) querying a next writable address indicating a location at which data is to be written next to the drive apparatus, so as to obtain the next writable address; (d) updating the metadata to reflect the writing of the data specified by the write request; (e) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc; and (f) | With reference to claim 1: the recording method comprising the steps of:(a) receiving a write request which specifies at least data for a file to be written;(b) instructing the drive apparatus to read a file entry of a metadata file which contains metadata for managing the file from a location of the write-once disc, so as to obtain the file entry of the metadata file;(c) obtaining track information indicating a location of each of the plurality of tracks;(d) determining a track from the plurality of tracks in which metadata is to be written next, based on the file entry of the metadata file and the track information;(e) instructing the drive apparatus to read the metadata from a location of the write-once disc, so as to |

| | |
|---|---|
| instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in the step (b) in the write-once disc. | obtain the metadata;(f) obtaining a next writable address indicating a location at which data is to be written next within a track other than the track determined in the step (d), the track being selected from the plurality of tracks;(g) updating the metadata to reflect the writing of the data specified by the write request;(h) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc; and(i) instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in the step (e) in the write-once disc. |

Claim 1 of the present application is anticipated by claim 1 of application 10597875 because it is broader in every respect.

| 10597863 | 10597875 |
|---|---|
| With reference to claim **6**: the system controller comprising a controller for | With reference to claim 5: the system controller comprising a controller for |

| controlling the drive apparatus, wherein the controller is configured to perform a process including the steps of: (a) receiving a write request which specifies at least data for a file to be written; (b) instructing the drive apparatus to read metadata for managing the file from a location in the write-once disc, so as to obtain the metadata; (c) querying a next writable address indicating a location at which data is to be written next to the drive apparatus, so as to obtain the next writable address; (d) updating the metadata to reflect the writing of the data specified by the write request; (e) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc; and (f) instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in | controlling the drive apparatus, wherein the controller is configured to perform a process including the steps of:(a) receiving a write request which specifies at least data for a file to be written; (b) instructing the drive apparatus to read a file entry of a metadata file which contains metadata for managing the file from a location of the write-once disc, so as to obtain the file entry of the metadata file;(c) obtaining track information indicating a location of each of the plurality of tracks;(d) determining a track from the plurality of tracks in which metadata is to be written next, based on the file entry of the metadata file and the track information;(e) instructing the drive apparatus to read the metadata from a location of the write-once disc, so as to obtain the metadata;(f) obtaining a next writable address indicating a location at which data is to be written next within a track other than the |

| the step (b) in the write-once disc. | track determined in the step (d), the track being selected from the plurality of tracks;(g) updating the metadata to reflect the writing of the data specified by the write request;(h) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc; and(i) instructing the drive apparatus to write at least a part of the updated metadata at the location from which the metadata is read in the step (e) in the write-once disc. |

Claim 6 of the present application is anticipated by claim 5 of application

10597875 because it is broader in every respect.

| 10597863 | 10597875 |
|---|---|
| With reference to claim **7**: wherein the controller includes a semiconductor integrated circuit. | With reference to claim 6: wherein the controller includes a semiconductor integrated circuit. |

Claim 7 of the present application is anticipated by claim 6 of application

10597875 because it is broader in every respect.

| 10597863 | 10597875 |
|---|---|
| With reference to claim **8**: wherein the program is configured to perform a process including the steps of: (a) receiving a write request which specifies at least data for a file to be written; (b) instructing the drive apparatus to read metadata for managing the file from a location in the write-once disc, so as to obtain the metadata; (c) querying a next writable address indicating a location at which data is to be written next to the drive apparatus, so as to obtain the next writable address; (d) updating the metadata to reflect the writing of the data specified by the write request; (e) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable | With reference to claim 7: wherein the program is configured to perform a process including the steps of:(a) receiving a write request which specifies at least data for a file to be written;(b) instructing the drive apparatus to read a file entry of a metadata file which contains metadata for managing the file from a location of the write-once disc, so as to obtain the file entry of the metadata file;(c) obtaining track information indicating a location of each of the plurality of tracks;(d) determining a track from the plurality of tracks in which metadata is to be written next, based on the file entry of the metadata file and the track information;(e) instructing the drive apparatus to read the metadata from a location of the write-once |

| address in the write-once disc; and (f) instructing the drive apparatus to write at least a part of the updated metadata to the location from which the metadata is read in the step (b) in the write-once disc. | disc, so as to obtain the metadata;(f) obtaining a next writable address indicating a location at which data is to be written next within a track other than the track determined in the step (d), the track being selected from the plurality of tracks;(g) updating the metadata to reflect the writing of the data specified by the write request;(h) instructing the drive apparatus to write the data specified by the write request to a location indicated by the next writable address in the write-once disc; and(i) instructing the drive apparatus to write at least a part of the updated metadata at the location from which the metadata is read in the step (e) in the write-once disc. |

Claim 8 of the present application is anticipated by claim 7 of application 10597875 because it is broader in every respect.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to IFEDAYO ILUYOMADE whose telephone number is

(571)270-7118. The examiner can normally be reached on Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. I./
Examiner, Art Unit 2627
08/12/2010

/Jason C Olson/

Primary Examiner, Art Unit 2627